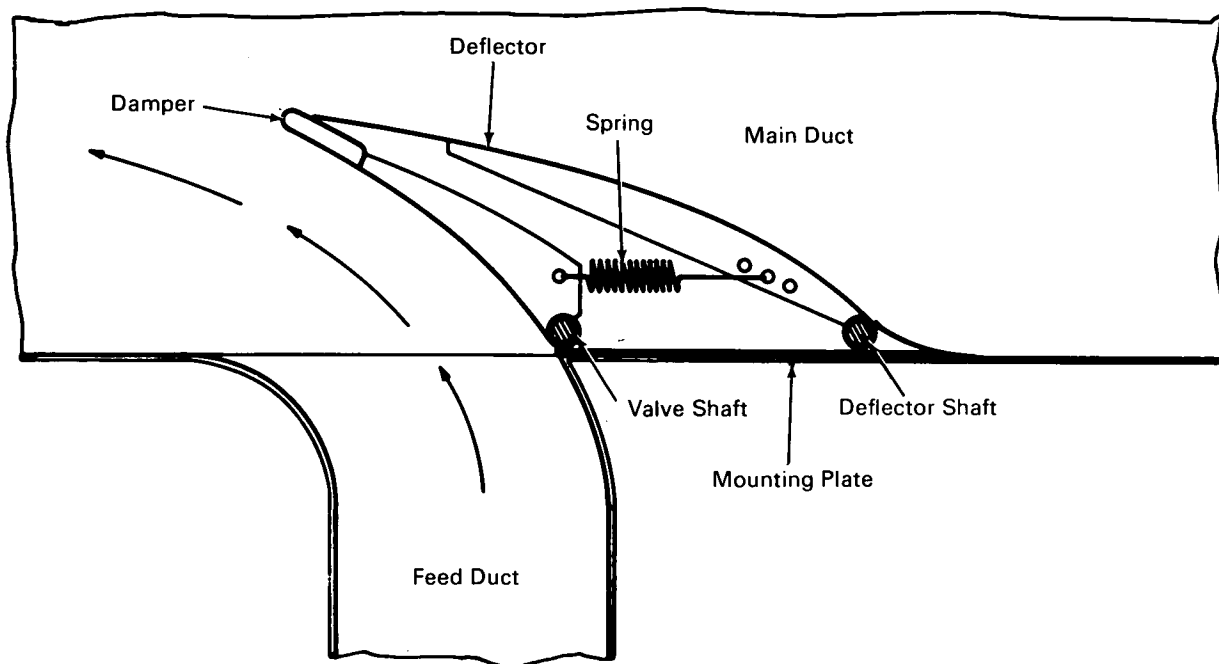


# NASA TECH BRIEF



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## Low-Noise Flow Valve for Air Ducts



Longitudinal Section of Manual Valve

A valve assembly for controlling air flow from a feeder into a main duct, with a minimum of turbulence, friction, pressure differential, and noise has been developed. As shown in the illustration, the valve contains three pieces: a damper, a deflector, and a spring. The streamlining of the damper and deflector acts to merge the flows smoothly, minimizing turbulence, while the spring reduces noise by keeping the damper and deflector in contact, thus eliminating valve chatter and damping vibrations.

The figure shows a manually controlled valve which was actually built and tested. Another design, for a pressure-controlled, automatically regulated valve,

is currently in the conceptual stage. This design concept, which uses a unique, zero-gradient calibrating spring, would control gas flow reasonably accurately within a wide range of supplied pressures, and, because of the simplicity of the design, would be reliable and relatively inexpensive.

### Note:

Requests for further information may be directed to:

Technology Utilization Officer  
Manned Spacecraft Center, Code BM7  
Houston, Texas 77058  
Reference: TSP70-10640

(continued overleaf)

**Patent status:**

No patent action is contemplated by NASA.

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